Detailed Site Report for the Global Nuclear Energy Partnership

Atomic City, Idaho Site

DE-FG07-07ID14801

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ENERGYSOLUTIONS

North Wind

Detailed Site Report

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EXECUTIVE SUMMARY

The Global Nuclear Energy Partnership (GNEP) is an initiative of the United States to work with other nations to develop and deploy advanced nuclear recycling and reactor technologies. The purpose of this initiative is to help provide reliable, emission-free energy with less waste burden of older technologies and without making available separated plutonium that could be used by rogue states or terrorists for nuclear weapons. These new technologies will make possible the use of safe, clean nuclear energy to help meet the growing global energy demand.

The Department of Energy (DOE) is the lead agency to implement the GNEP initiative and has developed a strategy that includes the pursuit of three key facilities:

1. A Consolidated Fuel Treatment Center, led by industry to separate components of spent fuel required by GNEP;

2. An Advanced Burner Reactor, led by industry to burn the actinide-based fuel to transform the actinides to a waste form for easier storage and to produce electricity; and

3. An Advanced Fuel Cycle (Research) Facility, led by the national laboratories, to be located at a government site.

In November, 2006 DOE awarded multiple contracts to perform 11 separate siting studies to determine the possibility of hosting a Consolidated Fuel Treatment Center and/or an Advanced Burner Reactor. The purpose of these siting studies, which address sixteen (16) predefined sections, is to provide DOE with sufficient information to understand the overall character and local environment of the proposed sites that could be affected by the GNEP facilities.

This Detailed Siting Report (DSR) describes the overall character of the Atomic City site and its local environment. Using the best and most current readily available public reference material, it describes the proposed site setting and the environment that could be affected. The Environmental data presented in this DSR will be used to support preparation of the GNEP Programmatic Environmental Impact Statement (PEIS).

Energy*Solutions*, LLC (Energy*Solutions*) and North Wind, Inc. (North Wind) teamed to offer Atomic City, Idaho, as a suitable site for locating both the Consolidated Fuel Treatment Center and the Advanced Burner Reactor. The proposed Atomic City site is privately owned and located in Bingham County; it consists of undeveloped property surrounded by undeveloped ranch land to the east, south and west and the Idaho National Laboratory (INL) site boundary to the north. The Atomic City site contains two tracts totaling approximately 3,310 acres including approximately 900 contiguous acres, which is well over the 500 contiguous acres required by the DOE for both facilities. There is sufficient room to provide suitably sized feed buffer and interim waste product storage capability. The site has water rights and access to a reliable source of water from the Snake River Plain Aquifer. There is strong local and state interest in and support for siting the proposed GNEP facilities; a recent survey by Boise State University found that Idahoans approve of both locating nuclear research and a research reactor in their state.

Section 1, Maps — The proposed Atomic City site covers approximately 3310 acres located in the arid high desert ranchland of east-central Idaho, in Bingham County, 46 miles west of Idaho Falls, 32 miles east of Arco, and 31 miles northwest of Blackfoot. The Atomic City site is less than 2 miles southwest of U.S. Highway 26. The northern boundaries of the site are approximately 0.1 miles south of the southern

boundary of the INL. The Atomic City site is bounded by undeveloped ranch land to the east, west and south. The Atomic City site is wholly located in Bingham County, in Township 1 North, Range 31 East, Sections 17 and 18 east Boise Meridian according to the Public Land Survey System (PLSS). The centroid of the Atomic City site is 43.43135^{o} north latitude, -112.8407645^{o} east longitude. Atomic City site dimensions are approximately 2.5 miles by 3.5 miles.

- Currently there are no existing structures or facilities within the boundaries of the Atomic City site. The only nearby facilities within a 6-mile radius of the site are Midway Airport and the INL.
- Two historical sites (a segment of the Oregon Trail and the old Salmon River Railroad – now the Union Pacific Railroad) cross the southeastern corner of the Atomic City site.
- The Atomic City site is above the flood plain, with no water bodies within the 6-mile radius. Water is available from wells in the Snake River Plain Aquifer beneath the site.
- The entire Atomic City site is currently zoned as A-Agricultural and a nearby area is zoned as Heavy Industrial. The site could be re-zoned for M2-Heavy Manufacturing.
- There are few residential areas within 6 miles of the Atomic City site.
- The Atomic City site is located approximately two miles south of United States (U.S.) Highway 26. The Atomic City site can also be accessed by U.S. Highway 20, approximately 7 miles northwest of the Atomic City exit road.
- Railroad access to the Atomic City site is provided by the Union Pacific Railroad line at the southwest corner of the property.
- Three to four miles of improved road would be needed to provide access for facility construction and operations depending upon the access route selected.
- Within a 50-mile radius of the Atomic City site, there are four major civil divisions: Arco, Blackfoot, Idaho Falls, and Pocatello.
- There are several federal, state, and local parks or natural areas located within 50 miles of the Atomic City site.

Section 2, Aquatic and Riparian Ecological Communities — The Atomic City site is situated in a remote location that has no fish or shellfish present due to a lack of surface water within or adjacent to the proposed site. Nevertheless, riparian ecological communities within the site locality have been addressed in sufficient detail to allow for the proposed environmental reviews and led to the conclusions that:

- The nearest live water is approximately 25 miles to the southeast at the Snake River.
- There is no aquatic or riparian vegetation present in the Atomic City site.
- Due to the dry climate and lack of perennial surface water within the Atomic City site, there are no riparian ecological communities present.

- A number of aquatic, riparian, or wetland communities exist within a 50-mile radius of the Atomic City site and are discussed within Section 2 of this report. The Snake River is the nearest large river and is located approximately 25 miles away from the site at its nearest point. These areas would not be affected by construction or operation of the GNEP facilities.

- There are man-made impoundments located at the nearby INL that are used for water evaporation and livestock watering impoundments can be found across Bureau of Land Management (BLM)-managed lands.

Section 3, Water Resources — The Atomic City site is located in the eastern Snake River Plain (ESRP) and lies above the Snake River Plain Aquifer, which would provide the only practical source of water for the proposed GNEP facilities. The Snake River Plain Aquifer encompasses an area of approximately 10,800 square miles bounded to the northwest and southeast by the Basin and Range Province and to the northeast by the Yellowstone Plateau. The aquifer consists primarily of a complex sequence of individual basalt flows, and the capacity of the aquifer is considered relatively high due to the fractured nature of the basalt. The closest major body of surface water is the Snake River, approximately 25 miles to the southeast. American Falls Reservoir lies to the south.

A review of the most current information based on readily available and existing literature led to the conclusions that:

- Water for the GNEP facilities could be obtained from on-site wells drilled into the Snake River Plain Aquifer. The aquifer is highly productive and provides a source of water to a large regional agricultural and aquaculture economy in southeastern Idaho and is not expected to be adversely affected by the GNEP facilities.

- Wells installed within the vicinity of the Atomic City site include INL monitoring wells and local wells for domestic use, livestock, and irrigation. A grant for a new public supply well has been issued to the community of Atomic City.

- The ground-water right for the Atomic City site is the subject of a partial decree entered into the Snake River Basin Adjudication. There are no issues with known or future ground-water rights, including Native American tribal ground-water rights associated with the project wells.

- Ground-water extraction from the Snake River Plain Aquifer would not adversely affect any wetlands or aquatic/riparian communities within or near the Atomic City site because no wetlands occur on or near the site and because of the large depth to ground water.

- No surface water or ground water would be adversely affected by discharges from the Atomic City site. The Atomic City site is not located near any surface waters.

Section 4, Critical and Important Terrestrial Habitats — The Atomic City site is at a remote location where human activities have the potential to disturb plant or wildlife habitat at or near the proposed site. Review of the critical and important terrestrial habitat surrounding the Atomic City site led to the conclusions that:

- There is no designated critical habitat at the Atomic City site.

- The important terrestrial habitat at the Atomic City site is comprised of sagebrush steppe, which is an important habitat for sagebrush-obligate species such as sage grouse and pygmy rabbit that are species of concern. Within the boundaries of the Atomic City site, the majority of this habitat has been converted to a crested wheatgrass/cheatgrass community that has been used for domestic livestock grazing and agricultural purposes.

- The ecological sites in the general area provide habitat that support a resident animal community that includes pronghorn antelope, sage grouse, coyotes, and black-tailed jackrabbits.

Section 5, Threatened or Endangered and Special Concern Species — Literature and field surveys were conducted to identify threatened, endangered, and species of special concern or other suitable habitat that occur within or near the Atomic City site. The following conclusions were reached based on these surveys.

- In Butte and Bingham Counties, 66 listed or special concern species exist. Two special concern species are known to occur on the Atomic City site (sage grouse and ferruginous hawk). Some species have the potential to occur, while suitable habitat for the remainder of the 66 species is not present on the Atomic City site, or the area within 10 kilometers (six miles).

- No federally listed species are present on the Atomic City site because their habitat requirements are not met.

- The following are the two special concern species that occur at the Atomic City site:

    - Sage grouse (*Centrocercus urophasianus*). The sagebrush habitat on the project area is limited to the southwest corner and the northern and western edges. Sage grouse were seen during the field survey, but the sagebrush is very fragmented and limited.

    - Ferruginous hawk (*Buteo regalis*), Prairie falcon (*Falco mexicanus*), and Townsend's big-eared bat (*Plecotus townsendii*). These species may use the area for foraging, but nesting and roosting habitat is not available on site. Ferruginous hawks were seen during the field survey hunting in the vicinity of the Atomic City site.

- Additional surveys need to occur to verify the presence of the following species on the Atomic City site: Western burrowing owl (Athene cunicularia), grasshopper sparrow (Ammodramus svannarum), loggerhead shrike (Lanius ludovicianus), sage sparrow (Amphispiza belli), Brewer's sparrow (Spizella passerine), pygmy rabbit (Brachylagus idahoensis), Piute ground squirrel (Spermophilus mollis) and Merriam's shrew (Sorex merriamii).

- Plant surveys during plant growth and flowering need to occur to verify the presence or absence of the following plant species of special concern: Lavender ipomopsis (Spreading gilia) (Ipomopsis polycladon [Gilia polycladon]), Lemhi milkvetch (Astragalus aquilonius), wingfruit suncup (Cammissonia pteropsperma), and green needlegrass (Nassella viridula [Stipa viridula]). Conversion of the native range to crested wheatgrass severely limits the potential for these species.

Section 6, Regional Demography — The Atomic City site contains parts of seven populated counties within an 80-kilometer (50-mile) radius. The results of this section show:

- This area is sparsely populated and primarily relies on agriculture, food processing, and services to support its economy. The population density within an 80-kilometer (50-mile) radius of the Atomic City site is approximately 30 persons per square mile, with a population density of less than one person per square mile within 32 kilometers (20 miles) of the Atomic City site. The most populated areas are along the Interstate 15 corridor.

- There are 25 minority census block groups and 28 poverty census block groups within an 80-kilometers (50-mile) radius of the Atomic City site.

- Unemployment in Idaho is below the national average. Employment in Idaho is growing at a rate faster than the national average. Southeastern Idaho has a significant professional, scientific, and technical labor force due to the presence of the INL and the four institutions of higher education.

- Numerous recreational areas, administered by various federal and state agencies and private entities, are located throughout southeast Idaho. Much of the land in this region is owned and/or administered by federal and state agencies.

- Social services, including airports, hospitals, and libraries, are concentrated in the more populated areas.

Section 7, Historical, Archaeological, and Cultural Resources —A review of the most current information based on readily available and existing files and field surveys of the Atomic City site indicates:

- There are no off-site historical, archaeological, or cultural resources that would be affected by the GNEP facilities.

- On-site historical, archaeological, and cultural properties on the site can be isolated to prevent the potential to be disturbed by construction and operation of the GNEP facilities.

- A portion of the Oregon Trail, Goodale's Cutoff, bisects the southern portion of the Atomic City site.

- A segment of the Salmon River Railroad exists within the Atomic City site boundary.

- Seven new sites and two previous recorded sites were found within the Atomic City site boundaries.

- Three of the newly recorded sites and the two previously recorded sites are eligible for inclusion on the National Register of Historic Places (NRHP). Two of the new, eligible sites are historic sites related to homesteads.

Section 8, Future Projects — Section 8 describes any known federal and non-federal projects within 5 miles of the vicinity of the site that may contribute to the cumulative environmental impacts of the proposed GNEP facilities. Within Butte and Bingham Counties the existing surrounding ownership is comprised of federal (INL and BLM), State of Idaho lands, and privately-owned land. Information about future projects indicates that:

- The INL Comprehensive Facility and Land Use Plan projects the land use of INL site facility for the next 100 years. The DOE is currently scheduled to maintain ownership for the INL lands and facilities until the year 2095 with no new plans of development at this time.

- Bingham County covers the Atomic City site to the south of the INL facility. The Bingham County Board of Commissioners has an established comprehensive plan that does not contain any projected changes to the area surrounding Atomic City for the next 20 years.

Section 9, Geology/Seismology — The Atomic City site is located on the west-central part of the ESRP, a large downwarped, basalt-filled structure that is the principal geomorphic feature in southeastern Idaho. The characterization of the Atomic City site's geology and seismology shows that:

- The most recent flows adjacent to the Atomic City site have been age-dated at 12,000 to 13,000 years.

- Volcanic hazard analyses were conducted at the INL in 1994. Subsequent studies have demonstrated that further analysis of volcanic hazards will be required for any facility on or near the INL.

- The historical earthquake record shows that the ESRP is seismically quiet (aseismic) relative to the surrounding Basin-and-Range province. Since the installation of local seismic networks in 1971, only 29 small magnitude microearthquakes have been detected within the ESRP. In contrast, thousands of earthquakes have occurred in the Basin-and-Range province surrounding the ESRP.

- The 1983 Borah Peak earthquake, located approximately 68 miles from the Atomic City site, produced the highest recorded horizontal Peak Ground Acceleration (PGA) in the project area, equal to 0.078g. The USGS National Seismic Hazard Map program predicts PGA values from 0.068g to 0.120g for this area.

- A total of 35 capable faults are located within 200 miles of the site. No capable faults are located within a 20-mile radius, nine faults are located within 20 to 50 miles, 19 faults are located within 50 to 100 miles, six faults within 100 to 150 miles, and one fault within 150 to 200 miles.

- No capable faults are located within a five-mile radius of the Atomic City site. The Howe section of the Lemhi fault is closest at 25.5 miles to the north. The next closest structure is the Arco section of the Lost River fault at 28 miles to the northwest. These faults are outside the ESRP.

- No faults have been identified in association with tension cracks and eruptive fissures within the late Pleistocene-Holocene lava fields.

- Compressive strength of the basalt ranges from approximately 3,000 to 15,500 pounds per square inch (psi).

Section 10, Weather/Climatology — The Atomic City site is at a remote location that has no site-specific meteorological data but climatological data at nine nearby National Weather Service (NWS) stations were reviewed and summarized. This information represents the best available data to support analysis of potential environmental impact of constructing and operating the proposed GNEP facilities. Review of the weather and climatological conditions surrounding the Atomic City site over the most recent 30 years (1971-2000) indicates that:

- Local climate is continental and semi-arid.

- Topography in the area is not extreme and does not appear to have a major influence on local climate.
- Normal and extreme temperature and precipitation can be characterized by data from a weather station that is 5.59 miles from the Atomic City site.
- Normal and extreme winds can be characterized by data from the Pocatello airport weather station.
- Normal daily average temperature ranges from 16.2° F in January to 69.2° F in July.
- Normal monthly precipitation ranges from 0.49 inch in January to 1.63 inch in May.
- Normal monthly windspeed ranges from 9.0 miles per hour in August to 11.8 miles per hour in April.
- Average annual temperature range is 26.8 to 57.1° F.
- Average annual precipitation (as rainfall equivalent) is 8.82 inches per year.
- Average annual windspeed is 10.1 miles per hour.
- Average annual prevailing wind direction is southwesterly (i.e. direction reported as 240°).
- Annual tornado probability within 1,000 square miles of the Atomic City site is 0.08 tornadoes per year.
- Idaho has no instances of hurricanes.
- One nonattainment area for the National Ambient Air Quality Standards (NAAQS) for the pollutant Particulate Matter $(PM)_{10}$ has been identified within a 80-kilometer (50-mile) radius of the site, located approximately 35 miles south. High PM_{10} concentrations have occurred here primarily from phosphate mining/mills.

Section 11, Hydrology/Flooding —The Atomic City site is at a location that is remote from streams and rivers that could be sources of flooding, and the site is far from any identified flood plains. A review of the hydrology and flood sources for the Atomic City site indicates:

- The nearest surface water feature is the Big Lost River, an intermittent flowing river located 9.5 miles from the Atomic City site;
- The Atomic City site is not within any of the 10-, 50-, 100- or 500-year flood plains delineated in government studies;
- The Atomic City site is over nine miles form the nearest 100-year or 500-year flood plains identified in previous studies and references;
- Failure of the Mackay Dam does not represent a flood hazard, and any flood inundation areas would still be 8.5 miles from the Atomic City site;

- Run-on to the site from perennial streams does not occur;

- Field studies were conducted as part of this review to delineate the overall watershed area and subareas, drainage reaches, stream channel dimensions (if applicable); and to describe vegetative cover and condition; and

- No evidence exists of the potential for severe environmental consequences associated with the hydrology/flooding for the construction and operation of the GNEP facilities.

Section 12, Regulatory and Permitting — National, state and regional regulatory and environmental requirements were reviewed and analyzed to identify permits, approvals, and procedures that could impose requirements on GNEP facilities developed and operated at the Atomic City site, and to pinpoint any requirements that might impose barriers to siting such facilities.

- No legislative or regulatory prohibitions that might prevent siting GNEP facilities at Atomic City were identified, and no processes that contained requirements capable of barring such facilities were found; and

- The body of data developed in the overall site study uniformly indicates that needed permits and approvals will be obtainable.

Section 13, Construction Costs — Relative costs for all elements of Heavy Construction in the Atomic City area were obtained from the commercially available RSMeans CostWorks 2007© database generated by Reed Construction Data. This shows:

- The weighted average cost factor for all elements of materials and installation in the Eastern Idaho / Pocatello area is **0.902**, indicating that this area experiences significantly lower construction costs than the 30-city average.

Section 14, Storage Capability —The Atomic City site is located in the arid high desert ranchland of east-central Idaho and currently has no storage facilities.

- The site is 3,310 acres and exceeds the minimum DOE size requirements for locating both the Consolidated Fuel Treatment Center facility and the Advanced Burner Reactor facility; and

- There is sufficient room to provide suitable sized construction zones, develop adequate feed buffer and interim waste product storage capability, and site supporting storage and ancillary facilities.

Section 15, Other Facilities — There are facilities located on the INL that involve potentially hazardous materials located within 5 miles of the Atomic City site. .

- The Federal Aviation Administration (FAA) Test Facility B-27-606 and a portion of Waste Area Group (WAG) 5, the Auxiliary Reactor Area (ARA). Remediation of these sites has been completed; therefore, no hazardous constituents remain on them.

- Another source of hazardous materials in the area is the result of the U.S. Navy performing practice firing within the INL boundary from 1943 to 1948, but trajectories did not fall within the 5-mile radius of the Atomic City site. There also is no record of any stray ordnance being discovered within this radius.

- There are no major airports within 10 miles of the Atomic City site. The nearest major airport is in Idaho Falls, approximately 35 miles to the east.

Section 16, National Priorities List / CERCLIS — A search of EPA's databases shows:

- No part of the Atomic City site appears or has ever appeared on the NPL, and.

- No part of the Atomic City site has appeared or has ever appeared in the Comprehensive Environmental Response, Compensation and Liability Information System **(**CERCLIS) database.

In summary, the DSR demonstrates that the Atomic City site is suitable for consideration and evaluation in the PEIS for location of the proposed GNEP fuel treatment and reactor facilities.

- Based on a review of National, State and regional regulatory and environmental requirements, no legislative or regulatory prohibitions for the site were identified and the site does not appear on any EPA databases.

- There are no site groundwater or surface water issues. The site has existing water rights from the Snake River Plain Aquifer underlying the site.

- The site has no designated critical habitat within its boundaries. While it does have habitat suitable for two species of concern, the habitat is limited and sparse and there is other suitable habitat in the area.

- There is a limited but typical number of historical, archaeological or cultural resources associated with Southeastern Idaho located on-site. However, these occurrences can be isolated to prevent the potential disturbance by construction and operation.

- The Atomic City site is located in an area of stable, but relatively low population with favorable climatological and geological, hydrological and seismic conditions.

- The Atomic City site is a Greenfield site, with no significant nearby hazardous facilities, making it easily adaptable to the needs of the GNEP facilities and their infrastructure. There is nearby highway and rail access and the weighted costs of heavy construction in the region are only 90 percent of the 30-city average.

INTRODUCTION

To meet growing demands for electricity, both nationally and globally, the DOE has established the GNEP. The goal of GNEP is to develop a world-wide consensus on expanding the use of economical, carbon-free nuclear energy. A plentiful, reliable supply of energy is the cornerstone of sustained economic growth and prosperity. Nuclear power is the only proven technology that can provide abundant supplies of base-load electricity without air pollution or emissions of greenhouse gases. GNEP is a comprehensive strategy to:

1. Increase U.S. and global security,

2. Reduce the risk of nuclear proliferation,

3. Provide fuel services to developing nations that limit use to power generation, and

4. Improve the environment.

GNEP will strive to provide safe expansion of clean, affordable power through 1) a major research and development initiative to establish the technical basis for reactor design and full fuel cycle management and 2) a major international policy initiative that addresses reactors, fuel supply, and reduction of potential for proliferation.

Two initiatives that address two key barriers to full development of nuclear power in the latter half of the twentieth century are: 1) how to use sensitive technologies responsibly in a way that protects global security and 2) how to dispose of waste safely. GNEP focuses on overcoming these barriers and doing so in cooperation with other advanced nuclear nations, to bring the benefits of nuclear energy to the world safely and securely.

In Fiscal Year 2007, funding was provided to initiate development of technology, and continue collaboration among industries and other nations. This collaboration builds on proven capabilities of the nuclear industry and fuel cycle nations to bring commercial-scale, advanced fuel-cycle technology into operation in the U.S. as quickly as possible. There are three facilities that are key to development and implementation of GNEP as listed below.

1. An Advanced Fuel Cycle Facility designed and directed by the U. S. National Laboratories that would be a modern, state-of-the-art laboratory to serve fuels research needs over the next 50 years.

2. A Consolidated Fuel Treatment Center capable of separating the usable components in light water spent fuel from the waste products.

3. An Advanced Burner Reactor capable of production of electricity consuming the usable products from spent fuel.

The first facility will be deployed at a national DOE laboratory. The DOE has awarded grants for siting studies to determine the suitability of thirteen proposed sites and eleven locations, including the Roswell, New Mexico site, for the second and third facilities. Detailed requirements and design criteria for these facilities have not yet been established and specific footprint and operational details are not currently known.

DOE has issued contracts for conceptual design of an Advanced Burner Reactor and grants for communities interested in hosting these GNEP facilities to compile publicly available data and document the suitability of the site they propose in a manner supportive of a National Environmental Policy Act (NEPA) analysis. The document prepared under the DOE grant may be broadly described as a summary of the affected environment.

The Detailed Site Report (DSR) for the Atomic City, Idaho site is presented in the following pages. The DSR describes the environment, physically, biologically, and socioeconomically, that could be affected by development and operation of the GNEP facilities. The Atomic City DSR is organized into the following 16 sections:

1. Maps;
2. Aquatic and Riparian Ecological Communities;
3. Water Resources;
4. Critical and Important Terrestrial Habitats;
5. Threatened or Endangered/Special Concern Species;
6. Regional Demography;
7. Historical, Archaeological, and Cultural Resources;
8. Future Projects;
9. Geology/Seismology;
10. Weather/Climatology;
11. Hydrology/Flooding;
12. Regulatory and Permitting;
13. Construction Costs;
14. Storage Capability;
15. Other Facilities; and
16. National Priorities List /CERCLIS[a].

[a] Comprehensive Environmental Response, Compensation and Liability Information System

CONTENTS

FIGURES

TABLES

ACRONYMS

AAC	Acceptable Ambient Concentrations
AACC	Acceptable Ambient Concentrations for Carcinogens
ACRS	Advisory Committee on Reactor Safeguards
AEA	Atomic Energy Act
AHPA	Archaeological and Historic Preservation Act
AMS	American Meteorological Society
AMSL	above mean sea level
AMWTP	Advanced Mixed Waste Treatment Project
ANL-W	Argonne National Laboratory – West
ARA	Auxiliary Reactor Area
ARC	Antecedent Runoff Condition
ASOS	Automated Surface Observing System
AVZ	Axial Volcanic Zone
BLM	Bureau of Land Management
bls	below land surface
BLT	Big Lost Trough
BOR	Bureau of Reclamation
BP	Before Present
BYU	Brigham Young University
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFA	Central Facilities Area
CFR	Code of Federal Regulations
COL	Combined License
COOP	Cooperative Observer Program
CRCW	Cultural Resource Clearance Worksheet
CWA	Clean Water Act
DNAG	Decade of North American Geology
DOD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
DSR	Detailed Site Report
EA	Environmental Assessment
EBR	Experimental Breeder Reactor
EIS	Environmental Impact Statement
EITC	Eastern Idaho Technical College
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
ESP	Early Site Permit
ESRP	eastern Snake River Plain
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map

FLPMA	Federal Land Policy Management Act
GIS	geographic information system
GLO	General Land Office
GMU	Game Management Unit
GNEP	Global Nuclear Energy Partnership
gpm	gallons per minute
GPS	Global Positioning System
HAP	Hazardous Air Pollutants
HSWA	Hazardous and Solid Waste Amendments
HVAC	Heating, Ventilation, and Air Conditioning
IDBS	Idaho Division of Building Safety
IDCL	Idaho Department of Commerce and Labor
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
INEL	Idaho National Engineering Laboratory
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
ISU	Idaho State University
IWTU	Integrated Waste Treatment Unit
ka	Thousand years ago
LSAPT	Large Scale Aquifer Pump Test
LQG	Large Quantity Generator
LWR	Light Water Reactor
M	magnitude
Ma	Million years ago
M_L	Local Magnitude (Richter magnitude)
MCL	Maximum Contaminant Levels
MFC	Materials and Fuels Complex
MLRA	Major Land Resource Area
MPF	Maximum Probable Flood
MPH	miles per hour
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NAD	North American Datum
NCDC	National Climate Data Center
NEIC	National Earthquake Information Center
NEPA	National Environmental Policy Act
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
NSR	New Source Review

NWI	National Wetland Inventory
NWR	National Wildlife Refuge
NWS	National Weather Service
OAQPS	Office of Air Quality Planning and Standards
ORTL	Off Reservation Trust Land
OU	Operable Unit
PBR	Permit by Rule
PE	probability of exceedance
PGA	Peak Ground Acceleration
PL	Public Law
PLSS	Public Land Survey System
PM	Particulate Matter
POR	Period of Record
PSD	Prevention of Significant Deterioration
PSHA	Probabilistic Seismic Hazard Analysis
PTC	Permit to Construct
PVNA	Portneuf Valley Nonattainment Area
RCN	Runoff Curve Numbers
RCRA	Resource Conservation and Recovery Act
ROI	Range of Influence
RTC	Reactor Technology Complex
RWMC	Radioactive Waste Management Complex
SA	Spectral Acceleration
SDHD	Southeastern District Health Department
SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SSA	Sole Source Aquifer
SSE	Safe Shutdown Earthquake
SWDA	Solid Waste Disposal Act
SWPPP	Storm Water Pollution Prevention Plan
TAN	Test Area North
TAP	Toxic Air Pollutant
TRA	Test Reactor Area
TSDF	Treatment, Storage, and Disposal Facility
UIC	Underground Injection Control
U.S.	United States
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
UUSS	University of Utah Seismograph Stations
WAG	Waste Area Group
WBAN	Weather-Bureau-Army-Navy
WMA	Wildlife Management Area
WSRP	western Snake River Plain